

**WHAT IS CLAIMED IS:**

1. A method for generating a work in progress (WIP) schedule in a semiconductor manufacturing facility, the method comprising:
  - determining starting and ending dates of a predetermined schedule period for generating the WIP schedule;
  - determining remaining days for completing at least one wafer lot associated with a predetermined product from the starting date;
  - determining a starting process stage for the wafer lot at the beginning of the starting date based on the remaining days;
  - determining an ending process stage for the wafer lot at the end of the ending date;
  - identifying all stages between the starting and the ending process stages;
  - assigning wafer numbers to each process stage of the schedule time in proportion to a process time of each stage in view of a total process time for the schedule period; and
  - repeating the above steps for one or more other wafer lots under production to determine a total wafer number assigned to each stage, thereby constructing the WIP schedule for the schedule period,

wherein at least one of the above steps is performed through a computing device.
2. The method of claim 1 wherein the starting date and the ending date are the same.
3. The method of claim 1 wherein determining a starting process stage further includes:

- identifying a process time for each process stage to complete the wafer lot;
  - identifying a remaining process time line indicating remaining time for completing the wafer lot; and
  - identifying the starting process stage along the remaining process time line based on the determined remaining days and a total process time for completing the wafer lot.
4. The method of claim 3 wherein identifying the starting process stage further includes:
- scaling the remaining days by a cycle time factor to obtain a time point; and
  - determining the starting process stage by identifying the time point along the remaining process time line.
5. The method of claim 1 further comprises generating one or more WIP schedules for one or more additional products for one or more process stages.
6. A method for generating a daily work in progress (WIP) schedule in a semiconductor manufacturing facility, the method comprising:
- determining a date for generating the WIP schedule;
  - determining remaining days for completing at least one wafer lot associated with a predetermined product from the date;
  - determining a starting process stage for the wafer lot at the beginning of the date based on the remaining days for completing the wafer lot;
  - determining an ending process stage for the wafer lot at the end of the date;
  - identifying all stages between the starting and the ending process stages;

assigning wafer numbers to each process stage in proportion to a process time of each stage in view of a total daily process time of the date; and

repeating the above steps for one or more other wafer lots under production to determine a total wafer number assigned to each process stage, thereby constructing the daily WIP schedule,

wherein at least one of the above steps is performed by a computing device.

7. The method of claim 1 wherein determining a starting process stage further includes:

identifying a process time for each process stage to complete the wafer lot;

identifying a remaining process time line indicating remaining time for completing the wafer lot; and

identifying the starting process stage along the remaining process time line based on the determined remaining days and a total process time for completing the wafer lot.

8. The method of claim 7 wherein identifying the starting process stage further includes:

scaling the remaining days by a cycle time factor to obtain a time point; and

determining the starting process stage by identifying the time point along the remaining process time line.

9. The method of claim 6 further comprises generating one or more WIP schedules for one or more additional products for one or more process stages.

10. A computer program for generating a work in progress (WIP) schedule in a semiconductor manufacturing facility, the program comprising instructions for:
  - receiving starting and ending dates of a predetermined schedule period for generating the WIP schedule;
  - determining remaining days for completing at least one wafer lot associated with a predetermined product from the starting date;
  - determining a starting process stage for the wafer lot at the beginning of the starting date based on the remaining days;
  - determining an ending process stage for the wafer lot at the end of the ending date;
  - assigning wafer numbers to each process stage between the starting and the ending process stages of the schedule time in proportion to a process time of each stage in view of a total process time for the schedule period; and
  - generating the WIP schedule for the schedule period after repeating the above steps for one or more other wafer lots under production to determine a total wafer number assigned to each stage.

11. The program of claim 10 wherein the starting dates and the ending dates are the same.

12. The program of claim 10 wherein the instructions for determining a starting process stage further includes instructions for:

receiving a process time for each process stage to complete the wafer lot; and identifying the starting process stage along a remaining process time line indicating remaining time for completing the wafer lot based on the determined remaining days and a total process time for completing the wafer lot.

13. The program of claim 12 wherein the instructions for identifying the starting process stage further includes instructions for:

scaling the remaining days by a cycle time factor to obtain a time point; and

determining the starting process stage by identifying the time point along the remaining process time line.